

Small Signal Fast Switching Diodes



FEATURES

- Fast switching speed
- High reliability
- High conductance
- For general purpose switching applications
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?999912



RoHS
COMPLIANT
HALOGEN
FREE

ADDITIONAL RESOURCES



MECHANICAL DATA

Case: DO-35 (DO-204AH)

Weight: approx. 125 mg

Cathode band color: black

Packaging codes / options:

TR/10K per 13" reel (52 mm tape), 50K/box

TAP/10K per ammpack (52 mm tape), 50K/box

PARTS TABLE

| PART | ORDERING CODE | TYPE MARKING | CIRCUIT CONFIGURATION | REMARKS |
|-------|---------------------|--------------|-----------------------|-------------------------|
| 1N914 | 1N914TR or 1N914TAP | 1N914 | Single | Tape and reel / ammpack |

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---|---|--------------|-------|------|
| Repetitive peak reverse voltage | | V_{RRM} | 100 | V |
| Working peak reverse voltage | | V_{RWM} | 75 | V |
| DC blocking voltage | | V_R | 75 | V |
| RMS Reverse voltage | | $V_{R(RMS)}$ | 53 | V |
| Forward continuous current | | I_F | 300 | mA |
| Average rectified current | Half wave rectification with resistive load and $f > 50\text{ MHz}$ | $I_{F(AV)}$ | 200 | mA |
| Non repetitive peak forward surge current | $t = 1\text{ s}$ | I_{FSM} | 1 | A |
| | $t = 1\text{ }\mu\text{s}$ | I_{FSM} | 4 | A |
| Power dissipation | $l = 4\text{ mm}$, $T_L = 25^{\circ}\text{C}$ | P_{tot} | 500 | mW |

THERMAL CHARACTERISTICS ($T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|--|---|------------|-------------|--------------------|
| Thermal resistance junction to ambient air | $l = 4\text{ mm}$, $T_L = \text{constant}$ | R_{thJA} | 300 | K/W |
| Junction temperature | | T_j | 175 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -65 to +175 | $^{\circ}\text{C}$ |

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | |
|--|---|------------|------|------|------|---------------|
| PARAMETER | TEST CONDITION | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Forward voltage | $I_F = 10\text{ mA}$ | V_F | | | 1 | V |
| Breakdown voltage | $I_R = 100\text{ }\mu\text{A}$ | $V_{(BR)}$ | 100 | | | V |
| Peak reverse current | $V_R = 75\text{ V}$ | I_R | | | 5 | μA |
| | $V_R = 20\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$ | I_R | | | 50 | μA |
| | $V_R = 20\text{ V}$ | I_R | | | 25 | nA |
| Diode capacitance | $V_R = 0, f = 1\text{ MHz}$ | C_D | | | 4 | pF |
| Reverse recovery time | $I_F = 10\text{ mA}, i_R = 1\text{ mA},$ $V_R = 6\text{ V}, R_L = 100\text{ }\Omega$ | t_{rr} | | | 4 | ns |

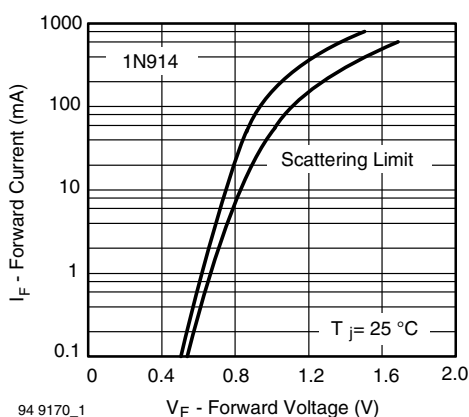
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Forward Current vs. Forward Voltage

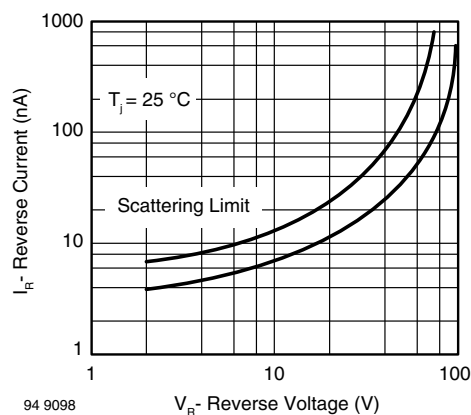
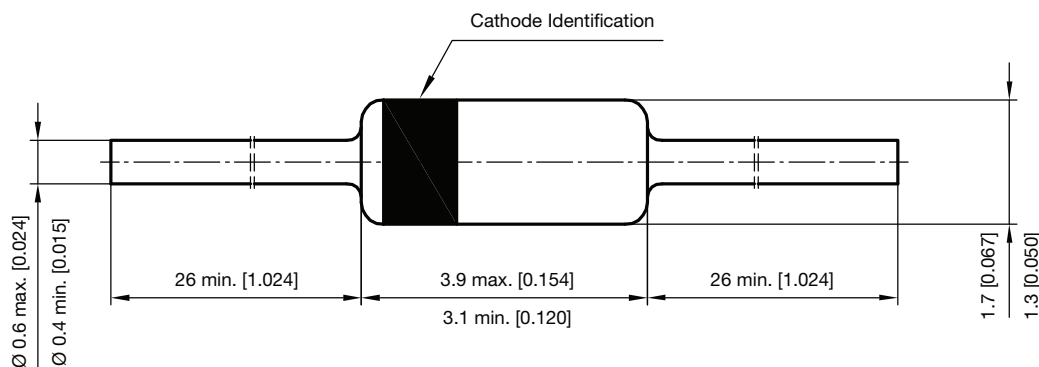


Fig. 2 - Reverse Current vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): **DO-35 (DO-204AH)**


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